

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for achieving a target trim amount of a feature on a substrate in a chemical oxide removal process comprising:

performing a chemical oxide removal process using a process recipe including a first reactant, a second reactant, an inert gas and a process pressure in order to acquire trim amount data as a function of a variable parameter, while maintaining at least one constant parameter constant, wherein said variable parameter is one of a first group of parameters including ~~a partial pressure~~an amount of said first reactant, ~~and a partial pressure~~an amount of said second reactant, ~~and a process pressure~~, and said at least one constant parameter different from said variable parameter is ~~a molar ratio of said first reactant and said second reactant~~one of a second group of parameters including an amount of said first reactant, an amount of said second reactant, and a process pressure;

determining a single, continuous relationship between said trim amount data and said variable parameter for said trim amount data ranging up to about 35 nm;

using said target trim amount and said relationship to determine a target value for said variable parameter;

chemically treating said feature on said substrate by exposing said substrate to said process recipe using said target value of said variable parameter and said at least one constant parameter; and

substantially removing said target trim amount from said feature.

2. (Canceled)

3. (Canceled)

4. (Original) The method of claim 1, wherein said substantially removing of said trim amount from said feature comprises thermally treating said substrate by elevating the temperature of said substrate following said chemical treating.

5. (Original) The method of claim 1, wherein said substantially removing of said trim amount from said feature comprises rinsing said substrate in a water solution following said chemical treating.

6. (Canceled)

7. (Canceled)

8. (Original) The method of claim 1, wherein said performing of said chemical oxide removal process includes using a process recipe including HF gas, NH₃ gas, and Ar gas.

9. (Currently Amended) The method of claim 8, wherein said acquiring of said trim data as a function of said variable parameter for said constant parameter includes acquiring said trim amount data as a function of a partial pressure of HF for a constant value of a molar~~mass~~ ratio of HF to NH₃, and said process pressure.

10. (Original) The method of claim 1, wherein said chemically treating of said feature includes chemically treating a silicon oxide feature.

11. (Original) The method of claim 1, wherein said determining of said relationship includes at least one of interpolation, extrapolation, and data fitting.

12. (Original) The method of claim 10, wherein said data fitting includes at least one of polynomial fitting, exponential fitting, and power law fitting.

13. – 15. (Canceled)